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ABSTRACT

The framework developed in this study is designed to detail the information needs of an evaluation situation, that is, information of any kind that might aid in determining the merit or worth of the program under consideration. More than 200 subcategories of information needs, tailored to instructional programs at the local level, are included in the framework. The information needs in each subcategory are accompanied by corresponding questions to aid the novice evaluator in relating the information needs to the specifics of the program. The framework is divided into three major categories: (1) History, contains those information needs which define how the program was initially conceived, planned and developed; (2) Operation, reviews the ongoing processes of the functioning program and helps the evaluator determine how well the program is functioning in the subcategories of curriculum and instruction, evaluation, and decision-making; and (3) Impact, concentrates on program results which include achievement, values, attitudes, expert judgements and subjective observations. The framework provides no techniques for implementation of the second phase of evaluation planning, that is, the selection of variables including time constraints, cost factors, audience needs, etc. (Author/PL)

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**A Framework for Identifying
Information Needs For
Evaluation Planning***

November, 1980



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**COLLEGE OF EDUCATION
WESTERN MICHIGAN UNIVERSITY
KALAMAZOO, MICHIGAN 49008**

**Aid Number 4
in
Instructional Aids Series**

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A Framework for Identifying
Information Needs For
Evaluation Planning*

by

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Research for Better Schools, Inc.

*Contents of this paper are based on a doctoral thesis, conducted at
Cornell University, Ithaca, NY.

November, 1980

Introduction

Educational evaluation studies are conducted to provide information about the context, the operation, and the outcomes of educational programs. An almost unlimited array of data is available for use in most evaluation studies, but evaluators must first identify these data and decide if, and how, they are to be used. This paper presents a tool to aid evaluators in the first of these tasks, identifying the variables or "information needs" that may be relevant to an evaluation study. The general term "information need" will be used throughout this discussion to indicate information in any form which might aid in determining the merit or worth of the program under consideration. Any data related to program outcomes, program effects, or other information that might help in describing or understanding the program can be classified as an "information need."

The tool presented herein is a framework for identifying information needs for evaluation planning. This framework delineates many aspects of instructional programs. It is designed to help evaluators systematically explore evaluation situations and to identify relevant information needs. The purpose of the framework is to aid evaluators in expanding their studies to cover more dimensions of a program, including side effects and unintended outcomes that might otherwise be overlooked.

The task of identifying information needs is not a trivial one. Many evaluation authors have commented on the overwhelming supply of data sources and variables that should be addressed. Scriven (1972, p. 2) characterizes the situation well when he describes "the jungle of possible effects" that confront the evaluator. Stufflebeam et al. (1971, p. 241) also recognize the "wide range of potentially relevant variables" that should be considered by the evaluator. As Cahen (in Wittrock and Wiley,

1970, p. 208) states, "It becomes apparent to the evaluator that there is an almost infinite number of possible dimensions to assess and evaluate. The innovator/evaluator must decide which dimensions have the greatest potential for providing information for himself while also providing multi-dimensional outcome measures for the potential consumer." Similarly, House (1973) urges the evaluator to have a healthy respect for the complexity of reality. The evaluator must step outside the program and view it from as many perspectives as possible. He or she must become a "diviner and delineator of the possible" (Bruner cited by Messick, in Wittrock and Wiley, 1970, p. 187). Both imagination and creativity are necessary to identify information needed by the educational customer (Wrightstone et al., 1969). Above all, the evaluator must recognize that no single outcome is paramount (Stake, 1968), and any area of the program may yield information of potential relevance to total impact.

Further review of the literature reveals only a few concrete strategies for the identification of information needs. Stake (1968, p. 535) offers the most salient advice to the evaluator. "He will give primary attention to the variables specifically indicated by the educator's objectives and derived from his rationale, but he must designate additional variables to be observed. He must search for unwanted side effects and incidental gains." Kneller (1972) agrees with this basic strategy, suggesting that evaluators be trained to observe both goals and side effects. Scriven (1972) also emphasizes the importance of observing a program's side effects. But even these suggestions provide only minimal direction. The evaluator must still derive a procedure for identifying the maze of information needs that exist in the evaluation situation. Zimiles (1975, p. 24) suggests "the evaluation procedure should begin with a theoretical framework that identifies all aspects of the educational environment...".

To aid the evaluator in identifying and dealing with this maze of information needs, the framework presented herein was developed. This framework provides a detailed guide for program factors that should be considered in the initial stages of evaluation planning. Following the lead of several other evaluation specialists, (Hammond (1973), Stufflebeam et al. (1971), Stake (1968)), the framework was constructed using a "comprehensive" approach to the task of evaluation. This approach assumes that the objectives and goals of the program will be used as a starting point, but that the evaluator will not be limited by these objectives and goals. Rather, the evaluator will move beyond them to examine other aspects of the program that can suggest important information needs, such as the program setting, the audiences involved, and the decision to be made, as well as possible unintended outcomes and side effects of the program.

It must be emphasized that the framework was designed primarily as an aid for the initial phase of evaluation planning. In this initial planning phase, the framework serves as a tool for examining the wide range of information needs that exist in any evaluation situation. However, after the information needs have been identified, the second phase of evaluation planning must occur. In this second phase, a selection of variables must take place; the evaluator must consider time constraints, cost factors, audience needs, and a host of other factors in order to choose the essential variables to be included in the evaluation study. Although the framework may be indirectly helpful in this process by making the evaluator aware of the wide range of options that exist, at some point selections must occur. The framework provides no techniques for focusing on the essential variables or implementing this selection procedure. Several evaluation authors have addressed this problem. The reader is referred especially to Stake (1972) for guidance in developing a selection technique.

The Framework for the Identification of Information Needs in Program Evaluation

The framework developed in this study is designed to detail the information needs of an evaluation situation, that is, information of any kind that might aid in determining the merit or worth of the program under consideration. More than 200 subcategories of information needs, tailored to instructional programs at the local level, are included in the framework. The information needs in each subcategory are accompanied by corresponding questions to aid the evaluator in relating the information needs to the specifics of the program.

The framework is divided into three major categories: History, Operation and Impact. The History category contains those information needs which define how the program was initially conceived, planned and developed. Four subcategories detail information needs related to events which occurred prior to the program's implementation. These four categories are program background, program development, program structure, and program actors.

The second major framework category, Operation, reviews the ongoing processes of the functioning program. The information needs in this category help the evaluator determine how well the program is functioning in the subcategories of curriculum and instruction, evaluation, and decision-making.

The final framework category, Impact, concentrates on program results. Each information need in the Impact category represents a possible end-of-program outcome. The first Impact subcategory, effects, includes achievement, values, attitudes, expert judgements and subjective observations. Each of these effects is considered relative to a specified group. Program costs are also addressed.

Use of the Framework

The framework has been constructed to facilitate evaluation planning. As such, it lends itself to a number of applications, depending on the experience of the user and the nature of the evaluation task. For the novice evaluator, the framework can serve as a training tool, helping beginning evaluators to become aware of the wide range of information needs that should be considered in planning any evaluation study. For more experienced evaluators, the framework can serve not only as an aid for evaluation planning, but also as a tool for adding or deleting variables during the course of an evaluation study when changes in the design are needed. The example presented on the following page illustrates one general approach to the use of the framework for evaluation planning. This example is meant to be neither complete nor conclusive, merely illustrative of how the framework could be employed in one given situation.

Example

An evaluator has been employed to plan and conduct the evaluation of a school district's reading program. To aid in formulating a list of potential information needs, the evaluator is using the framework presented in the final section of this paper. Beginning in the History category, the evaluator first encounters the major subhead of Program Background (1000). Moving on to the more specific entries shown by small indicator circles, the evaluator encounters the subhead Origins (1100). The accompanying questions prove interesting so the evaluator investigates the detailed information below. Two potential information needs are suggested by this section of the framework: 1) "Who originally proposed the current reading

program?" (suggested by entry 1110), and 2) "Which other reading programs were explored?" (suggested by entry 1123). Moving on to the next indicator circle, the evaluator finds entry 1200, Educational needs of the students. This subhead does not prove to be of interest. Similarly, the Justification entry (1300) does not seem relevant. The evaluator continues on to the following indicator circle, Contributing factors (1400), which proves more worthy of consideration. Examining the detailed entries, the evaluator finds entry 1411 to be a likely information need, and it is recorded in the form "Which groups or individuals were the most influential in getting the reading program adopted?" This process continues throughout the remainder of the framework.

The evaluator concludes with a list of potential information needs for the program being evaluated. At that point, the framework's contribution is complete, but the evaluator's planning task is not. The purpose of the framework is to make the evaluator aware of the many aspects of a program that could be considered in planning an evaluation study. However, only in an ideal evaluation study can each of the information needs identified in the initial planning stages be included in the evaluation study.

Some selection occurs as the evaluator develops the initial list of potential information needs from the framework. However, time, funding, and other constraints usually demand that the evaluator place even further limits on the information needs to be addressed by the evaluation study. Each evaluator must develop some method suitable for assessing the relative importance of the information needs identified and for determining the feasibility of including each of the information needs in the final program evaluation plan. Sources for guidance on this task were discussed earlier in this paper.

Empirical Study

Design

To determine the utility and effectiveness of the framework, an empirical study was conducted. One hundred four master's level graduate students with little or no training in evaluation participated in the study. These subjects assumed the role of evaluators and were given responsibility for planning a simulated evaluation study. They were first asked to identify all relevant information needs for the evaluation study and later were asked to rate each on importance. Two experimental groups were designated. Seventy six treatment subjects were asked to perform two tasks: (1) identify all information needs relevant for the evaluation before consulting the framework, and (2) use the framework to supplement the list of information needs in Task 1. Twenty eight control subjects were asked to perform Task 1 only.

This design actually provided two control groups--the designated control group and the pre-framework treatment group. That is, Task 1 was identical for the treatment and control groups. The treatment group's use of the framework in Task 2 constituted the experimental treatment. Thus, comparisons of the information needs generated by the treatment group in Task 1 (pre-framework) versus those generated by the same group in Task 2 (post-framework) were of most interest and will be the primary focus of this paper. However, comparisons between the control and treatment groups' pre-framework information needs will be used to verify the comparability of the two groups on this initial task and to establish the validity of the information needs generated by the pre-framework treatment group.

To regulate the amount and type of data available to the subjects, three simulated evaluation situations were constructed. One situation

required a summative evaluation, the second called for a context evaluation, and the third required a process evaluation. Each subject received one of these three evaluation situations. Directions for both the treatments and control groups contained a limited amount of background evaluation material, specified how information needs were to be stated, and described how importance and feasibility ratings were to be assigned. The directions for the treatment group also included a short explanation of the use of the framework.

Findings

The empirical study addressed four major questions. First, was the framework successful in broadening an evaluator's frame of reference? Did a person who had access to the framework identify more information needs of the evaluation situation than a person who did not have access to the framework? Second, if the framework was successful in bringing more information needs of the evaluation situation to the user's attention, how important were these new information needs? Were they meaningful or trivial? Third, did the type of evaluation situation change the effectiveness of the framework? Was the framework more suited to one type of evaluation situation than another? Fourth, how comprehensive was the framework? Which information needs were not included in the framework? The findings on each of these questions are examined in the following section.

Contributions of the Framework

Can the framework help to broaden an evaluator's frame of reference?

Did subjects identify more information needs when they had access to the framework? The first data relevant to these questions are the total number of information needs identified over all evaluation situations. Without the aid of the framework, pre-framework treatment subjects identified a median of approximately 15 information needs. (Control subjects identified a median of 15.5 information needs.) When the treatment subjects used the framework to re-explore the evaluation situation, they added a median of 20.5 new information needs, an increase of 126 percent. These results clearly indicate that the framework aided subjects in identifying more information needs.

To determine if the scope of the evaluations was broadened, data on the number of information needs identified per framework category were examined (Table 1). In the pre-framework task, treatment subjects identified approximately equal numbers of information needs in each of the History, Operation and Impact categories. This pattern did not hold true for the information needs identified in the post-framework task. The number of post-framework information needs identified in the History and Operation categories was about double the number of pre-framework information needs identified in these categories. In the Impact category, the number of pre-framework information needs was approximately equal to the number of post-framework Impact information needs. Statistical tests using a one factor repeated measures design showed significant differences in the number of treatment group post-framework information needs generated per category ($F_{2,75} = 48.85, p < .005$). There were no significant differences in the number of pre-framework information needs generated per category by the treatment group or the control group.

Table 1
Number of Information Needs,
By Framework Category and Treatment Task

Treatment Task	Framework Category		
	History N = 76	Operation N = 76	Impact N = 76
Pre-framework	Md. = 3.83	Md. = 2.67	Md. = 2.68
	$\bar{X}$ = 4.24	$\bar{X}$ = 3.34	$\bar{X}$ = 3.88
	SD = 3.08	SD = 3.07	SD = 3.40
Post-framework	Md. = 7.13	Md. = 7.07	Md. = 2.67
	$\bar{X}$ = 8.28	$\bar{X}$ = 7.96	$\bar{X}$ = 3.59
	SD = 5.21	SD = 6.16	SD = 4.17

These data suggest that the framework was especially successful in helping treatment subjects identify new History and Operation information needs--those information needs often neglected in evaluation studies. The framework also aided subjects in identifying some new Impact information needs. These results provide an initial indication that the framework can produce more comprehensive evaluation studies.

Relevance of Information Needs

Given the framework's success in increasing the number of information needs identified, the next question to be addressed was the importance assigned to the information needs.

After subjects had identified information needs, they were asked to rate each need on importance--ranging from A, Very High Importance to D, Low Importance. The results are shown in Table 2.

Table 2

Number of Information Needs Identified Per Importance Group, and Mean Importance Rating (MIR), by Treatment Task

Treatment Task	Importance Groups				MIR
	A Very High	B High	C Medium	D Low	
Pre-Framework	Md. = 3.75	Md. = 5.17	Md. = 3.17	Md. = 1.56	Md. = 2.77
	$\bar{X}$ = 4.25	$\bar{X}$ = 5.20	$\bar{X}$ = 3.73	$\bar{X}$ = 1.96	$\bar{X}$ = 2.82
	SD = 2.66	SD = 2.86	SD = 2.47	SD = 1.98	SD = .40
Post-framework	Md. = 3.33	Md. = 5.50	Md. = 5.50	Md. = 2.42	Md. = 2.63
	$\bar{X}$ = 4.52	$\bar{X}$ = 6.16	$\bar{X}$ = 5.96	$\bar{X}$ = 3.00	$\bar{X}$ = 2.64
	SD = 3.36	SD = 4.93	SD = 3.65	SD = 2.75	SD = .38

The pattern for both treatment tasks was similar. The number of information needs assigned to Importance Groups A and C was fairly high; it peaked in Importance Group B and dropped substantially in Importance Group D.

To summarize these data and facilitate interpretation, Mean Importance Ratings (MIRs) were computed separately for each subject's pre-framework and post-framework information needs. Summary statistics on these MIRs were then computed and are presented in the last column of Table 2.

The MIR for each subject was based on a weighted average:

$$\text{MIR} = \frac{4 (\text{Number A}) + 3 (\text{Number B}) + 2 (\text{Number C}) + 1 (\text{Number D})}{\text{Total Number of Information Needs Generated}}$$

(*Number A = Number of Information needs assigned to Importance Group A.)

The median MIR for the pre-framework information needs was 2.77 and 2.63 for the post-framework information needs. Although the difference of .14

was statistically significant favoring the pre-framework group (Wilcoxon Matched-Pairs Signed Ranks Test, $z = -2.68$ $p < .01$), this difference is not considered to be practically significant by this author. (No significant difference was found between the MIRs for the pre-framework treatment group and the control group.)

These findings show that treatment subjects assigned approximately the same importance to the information needs they generated before using the framework as to the information needs they identified with the aid of the framework. This indicates that the framework's contributions were judged by the subjects to be relevant, useful, and not at all trivial. As many very high and high importance information needs were generated after the framework was introduced as before. The subjects rated the needs constructed with the framework approximately as important as those initially conceived without reference to the framework.

Effect of the Evaluation Situation

How did the type of evaluation situation influence the effectiveness of the framework? Was the framework more suited to one type of evaluation situation than to another? The number of information needs identified was examined by situation (Table 3). For the pre-framework treatment task, few differences in the number of information needs identified for each of the evaluation situations were observed. (Control group results were similar). When treatment subjects were given access to the framework in the post-framework task, somewhat higher numbers of information needs were generated in S2, the Context Evaluation and S3, the Process Evaluation the less familiar evaluation situations than in 1, the summative evaluation situation. However, these differences were not statistically significant ($F_{2,73} = 1.74$, $p < .18$).

Table 3
Number of Information Needs Identified,
By Situation and Treatment Task

Treatment Task	S1 Summative N = 27	Situation S2 Context N = 25	S3 Process N = 24
Pre-framework	Md. = 14.75 $\bar{X}$ = 14.56 SD = 5.27	Md. = 14.00 $\bar{X}$ = 14.84 SD = 5.36	Md. = 16.50 $\bar{X}$ = 16.13 SD = 5.30
Post-framework	Md. = 13.00 $\bar{X}$ = 16.67 SD = 10.14	Md. = 21.33 $\bar{X}$ = 22.52 SD = 15.01	Md. = 21.50 $\bar{X}$ = 20.92 SD = 9.25

In general, the evaluation situation seems to have had little effect on the number of information needs generated. In the post-framework task, more heavily on the framework to supplement their original pre-framework group of information needs than those in the summative evaluation situation, but the differences were not significant. These results indicate that the framework was effective in aiding subjects to identify information needs for varied evaluation situations.

Comprehensiveness of the Framework

How comprehensive was the framework? Which information needs were not included in the framework? The framework was designed to be as comprehensive as possible. If subjects in the pre-framework tasks identified numerous information needs that were not already included in the framework, then the need for major revisions in the scope of the framework

would have been indicated. The number of nonclassifiable information needs was used as an indicator of the framework's comprehensiveness. An information need was labeled nonclassifiable if it did not correspond to any existing entry in the History, Operation or Impact categories.

For the control group, a median number of 4.5 nonclassifiable was found. For the pre-framework treatment group, a median number of 3.5 nonclassifiables was found. A medians test showed this difference to be nonsignificant ($\chi^2 = .56, p < .3$). Over both groups, the nonclassifiable information needs formed 11.83 percent of all information needs identified generated without the aid of the framework.

The classification scheme used to arrive at this figure was a conservative one. The 11.83 percent estimate was based on the experimenter's classifications, but when compared to other raters, the experimenter placed more information needs in the nonclassifiable category than any of the other raters. This tendency can be attributed to the experimenter's intention to use the content of the nonclassifiables as input for the final revision of the framework.

Summary

The evidence presented in the previous section shows the framework to be an important tool for broadening the scope and increasing the impact of evaluation studies. The framework provides an aid for planning and executing evaluation studies, enabling the evaluator to explore an evaluation situation fully and to identify information needs that otherwise might be overlooked. As a training tool for beginning evaluators,

the framework shows considerable potential. With it, novice evaluators can become aware of the wide range of information needs that should be considered in the planning of any evaluation study. For more experienced evaluators, the framework can serve not only as an aid for evaluation planning, but also as a tool for adding or deleting variables during the course of an evaluation study when changes in the design are necessary.

In the following pages, the framework is presented. Each of the three categories--History, Operation, and Impact, provides a compilation of information needs to aid the evaluator in examining evaluation situations. The purpose of the framework is to encourage evaluators to consider new program dimensions and to broaden the scope of their evaluation designs, both during the planning phase and throughout the course of the evaluation study. Each user's application of the framework will determine if these goals are accomplished.

**A FRAMEWORK FOR THE
IDENTIFICATION OF INFORMATION NEEDS
IN PROGRAM EVALUATION**

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1100 Origins

1110 Originators of the project

1120 Evidence presented

1121 *Opinions*

1122 *Research*

1123 *Surveys*

1124 *Exploration of alternative programs*

1200 Educational needs of students

1210 Instructional

1220 Personal/social

1230 Attitudinal/value

1300 Justifications

1310 Philosophy

1320 Support from the literature

Q1 WHAT FACTORS IN THE PROGRAM HISTORY MIGHT AID IN UNDERSTANDING SUBSEQUENT DEVELOPMENTS?

Q1000 What background information would be useful?

Q1100 How did the program get started? When was the idea first proposed?
How did the people react?

Q1110 Who were the original backers? What was their motivation?
Were they affiliated with the school? In what way?

Q1120 How did the original backers convince others that the program
was worthwhile? By what process was the proposed program
examined? What evidence was presented? In what form?

Q1200 What educational needs was the program to fulfill? Was there any
evidence (test scores, etc.) that such needs existed?

Q1300 What justifications were supplied for the proposed program?
Were they valid? Were they accepted?

Q1310 Was the program tied to a certain philosophy or educational
movement?

Q1320 Does the educational literature supply any information
relevant to the program? Is this information positive or
negative? Was this information brought out before the
program was adopted?

1330 Mission of the school district

1400 Contributing factors

1410 Institutional situation

1411 Influential groups

1412 Political considerations

1420 Economic Situation

1421 Funding requirements

1421.1 Federal

1421.2 State

1421.3 Local

1421.4 Private

2000 Program Development

2100 Time frame

Q1330 Is the program generally in agreement with the educational goals of the school district? How did the program fit the overall plan for the district?

Q1400 Why was the program adopted? What factors were the most influential? Did the majority of people agree that the program should be adopted?

Q1410 What conditions within the school district contributed to the adoption of the program? Were other alternative programs ruled out due to some of these conditions?

Q1411 Which groups or individuals had the most influence in getting the program adopted? How much influence did they have and how effective were they in applying pressure?

Q1412 Did the political situation (district, community, state or national) influence the program in any way?

Q1420 What was the economic situation within the district at the time the program was adopted? How did it influence program adoption?

Q1421 Was funding a major consideration? Was the program instituted primarily to fulfill funding requirements? How did these requirements influence the program?

Q2000 How was the program planned and developed?

Q2100 Was adequate time allocated for planning and development? Were deadlines met?

2200 Planning

2300 Input obtained

- 2310 Administrators
- 2320 Teachers/staff
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- 2340 Community

2400 Controversies

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- 2430 Means of resolution

2500 Information Dissemination

- 2510 Publicity
- 2520 Information sessions

3000 Program Structure

3100 Time Frame

3200 Target groups

- 3210 Types of students to be served

Q2200 How was the planning structured? How were responsibilities assigned? Who made the decisions?

Q2300 Who contributed input during the planning phase? Was participation voluntary or required? What type of input did each group contribute? Was all input valued equally?

Q2400 What controversies arose during the planning? Were they resolved? How?

Q2500 What type of information was distributed to promote the program? When was it distributed? Who received it?

Q3000 What program structure was formulated? How would an expert assess this proposed program structure?

Q3100 How long was the program supposed to run? When were various events to occur?

Q3200 To what groups was the program targeted? How were these groups identified? How many students was the program designed to serve?

3211 *Grade levels*
3212 *Ability levels*
3213 *Interests*

3220 Number of students to be served

3300 Prerequisites

Q3300 Were any prerequisites required of students, teachers or staff?
Why were these prerequisites imposed? How were they formulated?
How did they affect the selection of students and teachers?

3310 Students

3311 *Knowledge*
3312 *Skills*
3313 *Attitudes/values*

3320 Teachers/staff

3321 *Pretraining and orientation*
3322 *Knowledge*
3323 *Skills*
3324 *Attitudes/values*

3400 Program goals

Q3400 Were program goals formulated? By whom? For what purpose?
Were these goals realistic?

3410 Focus

3411 *Knowledge*
3412 *Skills*
3413 *Attitudes/values*
3414 *Involvement in program*

3420 Group

3421 Students

3422 Teachers/staff

3423 Family

3424 Community

3500 Program components

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3511 Basic program

3512 Extended program

3513 Special courses

3520 Activities

3521 Classroom

3522 Extra-curricular

3523 Community-directed

3530 Materials

3531 Range

3532 Variety

3533 Orientation

3540 Teaching approaches

Q3500 What was included in the *planned* program? How did this compare to similar programs in other school districts?

Q3510 How were course offerings planned? Did these new courses replace old ones or did they furnish additions to the curriculum? How did these new courses differ from what had taken place in the past?

Q3520 What activities were specified during planning and development? Were these activities a major concern of the program?

Q3530 What materials were specified during planning and development? Were these materials a major concern of the program?

Q3540 Was the program tied to certain teaching approaches? Which ones? What was the relationship between the teaching approaches, materials and activities used?

3541 *Philosophy*
3542 *Techniques*
3543 *Atmosphere*

3600 Program resources

3610 Funding

3611 *Sources for current funding*
3612 *Duration of current funding*
3613 *Prospects for continued funding*

3620 Budget allocations

3621 *Salaries*

3621.1 *Teachers/staff*
3621.2 *Administrators*
3621.3 *Support personnel*
(clerical, custodial)
3621.4 *Consultants*

3622 *Materials*

3622.1 *Instructional materials*
3622.2 *Equipment*
3622.3 *Office Supplies*

3623 *Pretraining and orientation*

3624 *Program activities*

Q3600 Were the resources sufficient to implement the program in the manner intended? If not, what was cut and what effect did this have?

Q3610 Was the funding sufficient? Where did it come from? What were the conditions for this funding?

Q3620 How was the funding budgeted? Were the allocations made fairly? Who made the budget decisions?

3625 Physical facilities

3625.1 New construction

3625.2 Remodeling

3625.3 Maintenance

3630 Personnel

3631 Specifications

3631.1 Job description

3631.2 Kinds and numbers hired

3631.3 Qualifications for positions

**3631.4 Pretraining and orientation
needed**

3632 Groups

3632.1 Teachers

3632.2 Staff

3632.3 Administrators

3632.4 Support personnel

3632.5 Volunteer aids

3640 Physical facilities

3641 Number of classrooms

Q3630 What personnel resources were available for the program? Were outside people hired or were the positions filled with current staff? How were personnel chosen? Who did the hiring? Did qualifications match the job descriptions? If not, was this due to lack of qualified personnel, lack of funding or other reasons? Were all positions filled?

Q3640 How well were the physical facilities suited to the needs of the program? How was the funding allocated for these facilities? Did any aspects of the physical facilities interfere with planned program activities?

3642 *Flexible spaces for independent work,
small group sessions, laboratory centers,
quiet areas for individual student study*

3643 *Facilities for student movement, games,
activities*

3644 *Library facilities, learning centers, etc.*

3645 *Other*

4000 Actors

4100 Project units

4110 Location, surrounding neighborhoods
4120 Physical appearance
4130 Class size
4140 Pupil-teacher ratios
4150 Homogeneity of student population

4151 *Ability*
4152 *Ethnic characteristics*
4153 *SES*
4154 *Sex*

4160 Attendance rate
4170 Completion rate

4200 Students

Q4000 Which people had an influence on or were influenced by the program? What characteristics did these people exhibit at the beginning of the program? How were these characteristics expected to interact with the program?

Q4100 How were the project units (districts, school classrooms, etc.) chosen to participate in the program? What characteristics best described those units? Were there any characteristics that made them unique?

Q4200 How did students who entered the program differ from those who did not participate? How were students with certain characteristics expected to react to the program?

4210 Biological characteristics

4211 *Age*

4212 *Sex*

4220 Ethnic characteristics

4221 *Nationality*

4222 *Language*

4223 *Religion*

4230 Ability level

4231 *Grade*

4232 *Achievement measures*

4233 *Skill measures*

4240 Attitudes

4241 *Interest in program*

4242 *Motivation*

4243 *Attitude toward school*

4250 Social history

4251 *SES*

4252 *Home background (see family)*

4253 *Peer affiliations*

4254 *Adjustment problems*

4260 Past project-related experiences

4261 *Direct involvement*

4262 *Indirect involvement*

4300 School personnel (teachers, staff,
administrators)

Q4300 How were school personnel chosen to participate in the program?
How did school personnel who participated in the program differ
from those who did not? Were any characteristics of the school
personnel desired specifically for the program?

4310 Biological characteristics

4311 Age

4312 Sex

4320 Ethnic characteristics

4321 Nationality

4322 Language

4323 Religion

4330 Attitudes

4331 Interest in program

4332 Attitude toward school and students

4333 Motivation

4340 Educational background and work
experience

4341 Academic training

4342 Highest degree

4343 Educational experience

4344 Certification status

4345 Experience outside education

4350 Environmental factors

4351 Income, salary

4352 Location of residence

4352.1 Inside local community

4352.2 Outside local community

4353 Leisure activities

4354 Involvements in community activities

4400 Family

Q4400 Were any characteristics of the family related to the program? How were these characteristics expected to change as a result of the program?

4410 Residence

4411 Urban

4412 Suburban

4413 Rural

4420 Income

4430 Family pattern

4431 Nuclear

4431.1 Both parents in the home

4431.2 Number of siblings

4432 Extended

4432.1 Composition of family unit

4440 Education

4441 Approximate formal level of each family member

4442 Technical training

4442.1 Industrial

4442.2 Military

4442.3 Community service

4442.4 Other

4450 Associations with school

4451 Number of children enrolled

4452 Knowledge of school programs

4453 Contact with school and staff

**4454 Participation in child-oriented
school activities (open house,
sports, student presentations)**

**4455 Participation in voluntary parent-
school organizations (PTA)**

4460 Home climate

4461 Intellectual climate

4462 Attitude toward education

4463 Level of aspiration for the child

4464 Parent-child relationships

4470 Affiliations

4471 Religious

4472 Political

4473 Social

4474 Professional

4475 Service

4476 Other

4480 Mobility

4481 *Length of time in community*

4482 *Previous reasons for moving*

4483 *Frequency of moving*

4500 Community

Q4500 Were any community characteristics related to the program? How were these characteristics expected to influence program performance?

4510 Geographical setting

4511 *Location*

4512 *Environment*

4520 Population characteristics

4521 *Demographic data*

4521.1 *Population size*

4521.2 *Population density*

4521.3 *Marriage and divorce rates*

4521.4 *Birth and death rates*

4521.5 *Age distribution*

4522 *Ethnic/nationality characteristics*

4523 *Linguistic characteristics*

4524 *Educational characteristics*

4525 *Change patterns*

4521.1 *Mobility*

4525.11 *Immigration*

- 4525.12 *Emigration*
- 4525.13 *Migrant-indigenous ratio*

4525.2 *Growth patterns*

4530 *Economic characteristics*

- 4531 *Commercial/industrial organization and development*
- 4532 *Occupational range*
- 4533 *Sources/median individual income*
- 4534 *Source of tax base*

4540 *Social characteristics*

4541 *Institutions and organizations*

- 4541.1 *Governmental/political*
- 4541.2 *Educational*
- 4541.3 *Religious*
- 4541.4 *Service*
- 4541.5 *Social*
- 4541.6 *Commercial*
- 4541.7 *Labor*
- 4541.8 *Professional*
- 4541.9 *Recreational*

4542 *Community power heirarchy*

- 4542.1 *Influential organizations and individuals*
- 4542.1 *Sources of major revenues*

OPERATION

5000 Curriculum and Instruction

5100 Planning

5110 Goals

5120 Values

5130 Context

5140 Input groups

5200 Curriculum

5210 Objectives

5211 *By subject matter*

5212 *By type of skill or behavior*

5212.1 *Knowledge*

5212.2 *Physical skills*

5212.3 *Personal/social skills*

Q2 WHAT HAPPENS DURING ACTUAL PROGRAM OPERATION?

Q5000 How are curriculum and instruction managed? Where are problems occurring?

Q5100 What planning was done for curriculum and instruction? How did it occur? How thorough was this planning?

Q5110 What goals were formulated? Were these goals realistic?

Q5120 What values entered into the planning decisions? How did these values influence curriculum and instruction decisions?

Q5130 In what context did the planning occur? How did this context influence the decisions made?

Q5140 Who helped with the planning? Was participation voluntary? What type of input came from the various participants? How much did this input influence the final planning decisions?

Q5200 What curriculum plan exists for the program? How carefully is it specified? Can it be put into practice? How would an expert in the field evaluate this curriculum?

Q5210 What are the objectives of the program? How are these objectives stated? Do they cover all aspects of the program? Can they be applied?

5212.4 Attitudes

5212.5 Values

5220 Scope

5221 Range of the curriculum

5222 Areas of concentration

5223 Provision for student needs

5230 Organization

5231 Within course sequence

5232 Articulation with other programs

5233 Provision for student transition
into and out of the program

5300 Instructional system

5310 Activities

5311 Variety

5312 Priority

5312.1 Relative importance of each
activity

5312.2 Time allocation for each activity

Q5220 How broad is the curriculum? What are major areas of concentration? Is the curriculum effective in meeting students' needs?

Q5230 How is the curriculum organized? Is it designed to complement other programs?

Q5300 What instruction takes place within the program? How does it occur? Is it suited to the needs of the students and the program?

Q5310 What activities occur during instruction? How are these activities tied to the program?

Q5311 How varied are the activities which occur? Does this depend on the teacher? Which activities are most popular?

Q5312 How important is each activity within the curriculum? Is adequate time allocated for the activity?

5313 *Appropriateness*

5314 *Congruence of activities with instructional objectives and program philosophy*

5320 *Materials*

5321 *Variety*

5322 *Origin*

5322.1 *Commercial*

5322.2 *Teacher-developed*

5322.3 *Student-developed*

5323 *Focus*

5323.1 *Urban, suburban, rural*

5323.2 *Middle class, lower class*

5323.3 *Race stereotyping*

5323.4 *Sex stereotyping*

5324 *Congruence with instructional objectives*

5325 *Scope*

Q5313 Are the activities appropriate to the students' grade levels, abilities, and interests?

Q5314 Are the activities designed to further instructional objectives? Are the activities based on the program philosophy?

Q5320 What materials are used in the program? Do they vary from teacher to teacher? How closely are they tied to the program?

Q5321 How many different types of materials are used within a single classroom? Are these tied to certain activities? Are the materials used effectively?

Q5322 What is the origin of the materials? How does this origin affect the value placed on the materials?

Q5323 Do the materials reflect any evident biases?

Q5324 How do the materials relate to the instructional objectives of the program? Do the materials reflect the program philosophy? How closely?

Q5325 Are the materials appropriate to the students? Can the students understand the materials? Do the students like the materials?

- 5325.1 *Range of ability levels reached*
- 5325.2 *Differing interests reached*
- 5325.3 *Motivational incentives provided*

5326 Availability

- 5326.1 *Adequacy of supplies*
- 5326.2 *Procedures necessary to obtain materials*
- 5326.3 *Concentration of use*

5330 Instruction

5331 Classroom presentations

- 5331.1 *Congruence with instructional objectives and program philosophy*

- 5331.2 *Integration with learning materials*

- 5331.21 *Degree of overlap*
- 5331.22 *Complementary or divergent aims*

- 5331.3 *Scope*

Q5326 Are the materials available when needed?

Q5330 What kind of instruction is taking place in the classroom? Is it adequate? How might it be improved?

Q5331 Do classroom presentations cover the essentials? How do these presentations vary from teacher to teacher? Are all reasonably adequate?

Q5331.1 Do the presentations aid students in mastering program objectives? How do the presentations relate to the program philosophy?

Q5331.2 Do classroom presentations clarify and expand on learning materials? Is the degree of overlap between presentations and materials related to the ability level of the students?

Q5331.3 Are the presentations appropriate to the students? Do students understand the presentations? Do the presentations stimulate student involvement?

- 5331.31 *Accuracy and adequacy of information presented*
- 5331.32 *Range of ability levels reached*
- 5331.33 *Differing interests reached*
- 5331.34 *Motivational incentives provided*

5332 *Method*

5332.1 *Teaching techniques*

- 5332.11 *Lecture*
- 5332.12 *Question-answer/discussion*
- 5332.13 *Problem solving*
- 5332.14 *Discovery/inquiry*
- 5332.15 *Laboratory/hands-on experience*
- 5332.16 *Independent study*

5332.2 *Instructional groupings*

- 5332.21 *Individualized*
- 5332.22 *Small group*
- 5332.23 *Entire class*

Q5332 What teaching methods are used? Are these methods prescribed as a part of the program or do they vary from teacher to teacher? Are the teaching methods effective?

Q5332.1 Do teachers use various teaching techniques or do they use a single technique most of the time? Which of the techniques seem to produce the best results?

Q5332.2 How are students grouped? Does this vary with the activity? In which groupings does the most learning seem to occur? Which groupings do students like best?

5332.3 *Teacher groupings*

5332.31 *Single teacher*

5332.32 *Team teaching*

5332.33 *Coordinated teaching efforts*

5333 *Teaching style*

5333.1 *Organization*

5333.11 *Degree of lesson preparation*

5333.12 *Clarity of presentations*

5333.13 *Anticipation of student needs*

5333.2 *Concern for learning*

5333.21 *Level of cognitive functioning elicited*

5333.22 *Attention to explanations and student questions*

5333.23 *Provision for differing ability levels*

5333.3 *Expectations for students*

Q5332.3 Is there always one teacher per classroom or are other combinations tried? What is the effect?

Q5333 How does the teaching style of each teacher fit into the program? Do teaching styles vary greatly? Which seem most effective for the program?

Q5333.1 Is the teacher well organized? Does this organization have an effect on the amount of learning that takes place in the classroom?

Q5333.2 Does the teacher really try to make learning happen? How does the teacher provide for various ability levels?

Q5333.3 Are the teacher's expectations for student learning realistic? How do these expectations influence actual student performance?

- 5333.31 *Stated or implied*
- 5333.32 *Appropriateness to student abilities*

5333.4 *Reinforcement techniques*

5333.5 *Classroom control techniques*

5333.6 *Teacher qualities*

- 5333.61 *Enthusiasm*
- 5333.62 *Flexibility*
- 5333.63 *Creativity*
- 5333.64 *Friendliness*

5334 *Learning atmosphere*

5334.1 *Student motivation*

- 5334.11 *Involvement*
- 5334.12 *Enthusiasm*
- 5334.13 *Expectations from program*

5334.2 *Student decisions*

- 5334.21 *Voice in classroom decisions*
- 5334.22 *Voice in individual course of study*
- 5334.23 *Choice in activities*

Q5333.4 *Are reinforcement techniques effective? Are they appropriate to the students?*

Q5333.5 *Is classroom control a problem? Does this interfere with learning?*

Q5333.6 *Which teacher qualities stand out? How do these qualities affect learning outcomes?*

Q5334 *In what environment does learning take place? Is it a supportive environment for student growth?*

Q5334.1 *How motivated are the students? How does the level of motivation affect the learning that takes place?*

Q5334.2 *Are students involved in classroom decisions? In what way? How does this involvement affect motivation and learning?*

5334.3 *Classroom interactions*

5334.31 *Frequency and type*

5334.311 *Teacher-student*

5334.312 *Student-student*

5334.4 *Classroom roles*

5334.41 *Teacher*

5334.411 *Instructor*

5334.412 *Resource person*

5334.413 *Leader*

5334.414 *Group member*

5334.415 *Participant*

5334.42 *Student*

5334.421 *Instructor*

5334.422 *Resource person*

5334.423 *Leader*

5334.424 *Group member*

5334.425 *Participant*

5334.426 *Leamer*

5334.5 *Emphasis on creativity*

5334.51 *Opportunity*

5334.52 *Encouragement*

Q5334.3 What type of classroom interactions occur? How often does the teacher talk to any given student? For what reasons? How freely do students interact with one another?

Q5334.4 What roles do the teacher and students assume? Is the teacher always a teacher and the student always a student?

Q5334.5 Does the teacher encourage student creativity? How?

5335 Instructional support system

5335.1 Availability and use of class-room aids and support personnel

5335.2 Coordination with other school personnel and services

5335.3 Availability of supplementary instruction

5335.31 Remedial programs

5335.32 Accelerated programs

5400 Outside classroom program activities

5410 Student extra-curricular activities

5411 Types

5411.1 Clubs

5411.2 Sports

5411.3 Volunteer work

5411.4 Other

5412 Relationship to program

Q5335 What type of support system exists to aid the teachers and students involved in the program?

Q5335.1 Are aids available? What services do they perform? Are they used as effectively as possible?

Q5335.2 Is the program coordinated with other school services (guidance, testing, related subject areas, etc.)? How is this handled?

Q5335.3 Is supplementary instruction available for program students, either within the program or from the school support system? What types of supplementary instruction are offered?

Q5400 What outside classroom activities are included as a part of the program? What groups participate in these activities—students, family, community, etc.? How are these outside classroom activities related to in-classroom activities?

Q5410 What types of outside classroom activities are offered for students? Are they tied to specific areas of the program?

5412.1 *Required*

5412.2 *Optional*

5413 *Purpose*

5413.1 *Increase motivation*

5413.2 *Provide enrichment*

5413.3 *Convert theory into practice*

5420 *Family-related activities*

Q5420 Do any program activities relate to the family? Which families participate?

5421 *Open house, parent orientation programs*

5422 *Student presentations*

5423 *Volunteer classroom work*

5424 *Program planning*

5425 *Discussion sessions*

5426 *Parent-school organizations*

5427 *Home visits*

5427.1 *Purpose*

5427.2 *Frequency*

5430 *Program affiliation with community organizations*

Q5430 How is the program affiliated with various community organizations? Has this affiliation resulted in positive or negative effects?

5431 *Governmental*

5432 *Religious*

5433 *Service*

5434 *Commercial*

5435 *Recreational*

5436 *Protection*

5437 *Special interest groups*

5440 Program affiliation with other educational institutions

5441 *Federal educational institutions*

5442 *State educational institutions*

5443 *Universities*

5444 *Neighboring schools*

5445 *Schools with similar programs*

6000 Evaluation Procedures

6100 Student evaluation

6110 Testing

6111 Types

6111.1 Standardized tests

6111.11 *Aptitude*

6111.12 *Achievement*

6111.13 *Interest*

6111.2 Teacher-made tests

6111.21 *Subject matter*

6111.22 *Form*

Q5440 Is the program affiliated with any other educational institutions? How do these affiliations further the program?

Q6000 How are students evaluated in the program? How are teachers evaluated? Are periodic checks made on the program itself?

Q6100 What type of student evaluation takes place? Have there been any complaints about this evaluation by students, teachers, or parents?

Q6110 What type of testing program is used for student evaluation? Is this tied in with other school testing? Who planned the testing program? How is it administered? Do the tests furnish useful information?

Q6111 Are standardized tests used? How are they chosen? What teacher-made tests are used? How are teacher-made tests constructed?

6112 Approach

6112.1 Norm-referenced

6112.2 Criterion-referenced

6113 Frequency and duration

6114 Use

6114.1 Personnel receiving testing information

6114.11 Administrators

6114.12 Guidance personnel

6114.13 Teachers

6114.14 Students

6114.15 Parents

6114.2 Uses of testing information

6114.21 Program progress results

6114.22 Student diagnosis and improvement

6115 Congruence of tests with program goals and instructional objectives

6120 Assessment and grading

Q6112 Is a norm-referenced or criterion-referenced testing system used? Is this testing system tied to the program philosophy? How? What reactions do teachers, parents and students have to the norm-referenced or criterion-referenced systems?

Q6113 Is testing a burden on teachers and students? If so, is there any way to improve the situation?

Q6114 How are test results used? Who receives the results and how do these people use them? Are results used to diagnose student difficulties?

Q6115 Do the tests measure the achievement of program goals and instructional objectives?

Q6120 How does grading and student assessment occur? What factors are weighted most heavily in this process?

6121 Weight of various test results

6121.1 Standardized

6121.2 Teacher-made

6122 Weight of classroom papers and projects

6123 Subjective teacher input

6124 Student input

6124.1 Grade contracting

6124.2 Opportunity to question grading techniques

6130 Reporting

6131 Parents

6131.1 Written reports

6131.11 Frequency

6131.12 Quality

6131.2 Parent-teacher conferences

Q6121 Do test results largely determine the students' grades and assessment? Are the tests a valid indicator of the students' accomplishments?

Q6122 Do classroom papers and projects receive any attention in student evaluation? How much time must the student devote to these projects and papers?

Q6123 How much weight does the teacher's subjective input carry? Is this detrimental or beneficial to the student?

Q6124 Do students have any input into the evaluation process? How does this occur? What is the effect?

Q6130 How are student evaluation results reported? Are these reports written or verbal? Is just a grade assigned or are detailed comments included?

Q6131 What information do parents receive on student evaluation? How is this information communicated?

6131.21 *Frequency*

6131.22 *Focus*

6132 *Students*

6132.1 *Feedback on homework, projects,
tests, etc.*

6132.11 *Grades*

6132.12 *Written comments*

6132.13 *Oral comments*

6132.2 *Individual teacher-student
conferences*

6132.21 *Frequency*

6132.22 *Focus*

6200 *Teacher evaluation*

6210 *Supervision by superiors*

6211 *Voluntary or required*

6212 *Form of supervision*

6212.1 *Classroom observations*

6212.2 *Conferences*

6212.3 *Review of materials*

Q6132 *What information do students receive on their progress?
How is this information communicated?*

Q6200 *Is there any form of teacher evaluation in the program? How does
it occur? How are the results used?*

Q6210 *What type of supervision is provided by superiors? How do
teachers react to this supervision? Is the data used as a means
of teacher improvement or as an assessment of merit?*

Q6211 *Is supervision voluntary or required? If voluntary, how
many teachers participate? How do they compare to the
teachers who do not participate?*

Q6212 *How is the supervision performed? By whom? Which
supervision techniques are employed?*

6213	<i>Frequency of supervision</i>	Q6213	Is the supervision frequent enough to be of value?
6214	<i>Feedback provided</i>	Q6214	How is feedback provided to the teacher?
6215	<i>Use of supervision data</i>	Q6215	Who receives the data on supervision? How is it used? What effects does it produce?
6220	Student evaluation of teachers	Q6220	Is student evaluation of teachers employed? For what purpose? Is it voluntary or required? How do teachers react to it? How do students react?
6230	Teacher self-evaluation	Q6230	Is there any opportunity for teacher self-evaluation? How many teachers participate? Are there any noticeable effects?
6300	Internal program evaluation	Q6300	Do assessments of the program and its performance occur periodically? At what level do these occur? Who is responsible for initiating them?
6310	Provisions made in program plan for ongoing evaluation	Q6310	Did the original program planners build in provisions for internal evaluations? How was this done? Has the plan been carried out?
6320	Major focus of ongoing evaluations	Q6320	If ongoing evaluation occurs, what parts of the program are examined? In what detail?
6330	Personnel involved	Q6330	Who is responsible for carrying out the internal evaluations? What other personnel are involved?
6340	Information collection techniques	Q6340	How is information collected? What type of information is collected?
6341	<i>Ongoing achievement results</i>		
6342	<i>Information on progress of program implementation</i>		
6343	<i>Participant reactions to the program</i>		

- 6343.1 *Teachers*
- 6343.2 *Students*
- 6343.3 *Administrators*
- 6343.4 *Community*

6350 Purpose

- 6351 *Record of program events*
- 6352 *Feedback for ongoing improvement*

6360 Action taken

- 6361 *Changes implemented*
- 6362 *Decisions based on the evaluation information*

7000 Program Decision-Making

7100 Management responsibilities

7110 Instruction and curriculum

- 7111 *Organization*
- 7112 *Content*
- 7113 *Materials*
- 7114 *Activities*
- 7115 *Testing and evaluation*

7120 Staff personnel concerns

7130 Pupil concerns

Q6350 Are the ongoing evaluations worthwhile? How is the information used? Is the program flexible enough to incorporate the changes?

Q6360 What actions result from the internal evaluations?

Q7000 What is the decision-making chain of command? How are decisions made within each level of the program? Who is responsible for these decisions? How are they implemented?

Q7100 Who coordinates various areas of the program? What are the responsibilities of each coordinator?

7140 Scheduling and organization

7150 Finance and business management

7160 Physical plant and services

7170 School-community relations

7200 Management effectiveness

7210 Ability of coordinators

7220 System interactions

Q7200 Does the management system function smoothly? Is it effective?

Q7210 Does each coordinator handle his or her responsibilities well?
Are decisions carefully considered and properly implemented?

Q7220 Do coordinators cooperate on projects when possible? Is there
duplication of effort? Is there any competition among coordinators?

IMPACT

8000 Effects**

8100 Achievement

8110 Knowledge

- 8110.01 *Names and nomenclature*
- 8110.02 *Symbols, rules, standardized processes, definitions*
- 8110.03 *Properties, parts, characteristics, features, elements, dimensions*
- 8110.04 *Trends and sequences*
- 8110.05 *Similarities and differences, discriminations, classifications*
- 8110.06 *Contexts, locations, and orientations*
- 8110.07 *Operations, methods of dealing with, function*

Q3 WHAT WERE THE RESULTS OF THE PROGRAM?

Q8000 What effects have resulted from the program?

- Q8100 On which achievement areas did the program focus? Did the program influence achievement in related courses where the program skills could be applied? Did post-program performance show any long-range achievement effects?
- Q8110 What gains in knowledge have occurred? How rapidly did these gains occur? Which of these gains fulfilled program objectives? Which were unanticipated?

**Note: For each Effect to be investigated, data must be collected on some group or subgroup of people. These are outlined in section 9000, *Groups*. For any one effect, the user may wish to measure several groups and/or subgroups.

8110.08 *Cause and effect relationships*

8110.09 *Generalizations*

8110.10 *Criteria or standards*

8110.11 *Non cause-effect relationships*

8120 *Cognitive skills*

Q8120 Did the program have an effect on the students' cognitive skills? How did these cognitive skill changes relate to program objectives? Which of the changes were unexpected?

8121 *Acquiring information*

8121.1 *Viewing*

8121.2 *Hearing*

8121.3 *Feeling*

8121.4 *Smelling*

8121.5 *Tasting*

8122 *Evaluating for adequacy*

8122.1 *Authoritativeness of sources*

8122.2 *Logical consistency and
accuracy*

8122.3 *Relevance to desired learning
purposes*

8122.4 *Adequacy for acting or deciding*

8123 *Organizing information*

8123.1 *Labeling, naming, numbering,
coding*

8123.2 *Recording, listing*

8123.3 *Classifying, categorizing,
grouping*

- 8123.4 *Ordering, sequencing*
- 8123.5 *Manipulating, arranging, transforming, computing*
- 8123.6 *Estimating*
- 8123.7 *Summarizing, abstracting*

8124 *Interpreting information*

- 8124.1 *Decoding verbal and nonverbal symbols*
- 8124.2 *Inferring, interpolating, extrapolating*
- 8124.3 *Analyzing*
- 8124.4 *Associating, relating, equating*
- 8124.5 *Comparing, contrasting, discriminating*
- 8124.6 *Synthesizing*
- 8124.7 *Testing against standards or criteria*
- 8124.8 *Generalizing*

8125 *Using information to produce new information*

- 8125.1 *Theorizing, predicting*
- 8125.2 *Formulating hypotheses*
- 8125.3 *Testing hypotheses*
- 8125.4 *Revising hypotheses*

8126 *Acting on the basis of information*

- 8126.1 *Reacting*
- 8126.2 *Making decisions*
- 8126.3 *Solving problems*
- 8126.4 *Adapting, modifying*
- 8126.5 *Restructuring values, behavior*

*8126.6 Creating on the basis of
knowledge and process*

8130 Technical skills

Q8130 What new technical skills were acquired? To which areas of the program were they related?

8200 Values

Q8200 Which values did the program attempt to change? Which values changed unexpectedly?

8210 Self-worth

Q8210 Was opinion of self-worth affected? Did people view themselves differently as a result of the program?

8220 Social ideals

Q8220 Did the program have any effect on social ideals?

8230 Social processes

Q8230 Were any changes in social processes observed?

8240 Social rights

Q8240 Were social rights values changed?

8250 Social institutions

Q8250 Were social institution values altered?

8260 Social regulators

Q8260 Were the values of social regulators influenced?

8270 Cultural heritage

Q8270 Were cultural heritage values affected?

8300 Attitudes**

Students
Teachers/staff
Administrators
Families
Community
Related institutions

TOWARD

Q8300 What attitudes have changed as a result of the program? How did these attitudes affect program development and operation?

Program
School
Students
Teachers/staff
Administrators
Families
Community
Related institutions

**Note: Any member of the left column may have an attitude TOWARD some element in the right column.

8400 Expert Judgments**

Students
Teachers/staff
Administrators
Specialists

ON

Q8400 How do program participants and outside specialists assess various parts of the program? What is their judgment on program worth?

Program rationale
Program planning
Program structure
Program curriculum
Instructional procedures
Program decision-making
Program effects
Program worth

**Note: Any member of the left column may make a judgment ON any member of the right column.

8500 Subjective observations

8510 Relationships**

8511 Student
Teacher
Community
Administrator
Family
Institution

WITH

Q8500 What program effects were revealed by subjective observations of the interactions between actors and program?

Q8510 Were any changes in relationships observed? How did these occur? Were they fostered by the program?

Student
Teacher
Community
Administrator
Family
Institution

**Note: Relationships may occur between any member of the right column and any member of the left column.

8520 Personalities

8530 Typical incidents

8540 Critical incidents

9000 Groups

9100 Students

9110 Subgroups

9111 Sex
9112 Age
9113 Grade

Q8520 Which personalities strongly affected the program? In what ways?

Q8530 Which typical incidents best portrayed the total program effect?

Q8540 Which critical incidents affected the program?

Q9000 For which groups of actors should the Effects (8000) be measured?

Q9100 Was a given Effect related to students? Did various student sub-groups show different results on this Effect?

- 9114 *SES*
- 9115 *Ethnic origin*
- 9116 *Ability level*
- 9117 *Subject matter*
- 9118 *Student organizations*
- 9119 *Special groupings*

9200 Teachers/staff

Q9200 Was a given Effect related to teachers or staff? Did some subgroups show different results than others?

9210 Subgroups

- 9211 *Sex*
- 9212 *Age*
- 9213 *Highest degree*
- 9214 *Certification status*
- 9215 *Teaching experience*
- 9216 *SES, salary*
- 9217 *Subject matter*
- 9218 *Ethnic origin*
- 9219 *Union affiliation*

9300 Administrators

Q9300 Should administrators be measured for this Effect? Which subgroups should be examined separately?

9310 Subgroups

- 9311 *Sex*
- 9312 *Age*
- 9313 *Ethnic origin*
- 9314 *SES, salary*
- 9315 *Highest degree*
- 9316 *Rank or position*
- 9317 *Educational experience*
- 9318 *Administrative experience*

9400 Family

Q9400 Was the family related to this Effect? Which subgroups of families were of most interest?

9410 Subgroups

- 9411 Age of parents
- 9412 Number of children
- 9413 Income
- 9414 Ethnic origin
- 9415 Place of residence (urban, suburban, rural)
- 9416 Educational level of parents
- 9417 Participation in school activities
- 9418 Length of time in the community

9500 Community

Q9500 Was the community involved in this Effect? Which subgroups of the community showed varying results?

9510 Subgroups

- 9510.01 Age
- 9510.02 Sex
- 9510.03 Ethnic origin
- 9510.04 Income, SES
- 9510.05 Educational levels
- 9510.06 Place of residence (urban, suburban, rural)
- 9510.07 Location in school district
- 9510.08 Political affiliations
- 9510.09 Religious affiliations
- 9510.10 Professional organizations
- 9510.11 Commercial organizations
- 9510.12 Labor organizations
- 9510.13 Service organizations
- 9510.14 Special interests

9600 Institutions

9610 Local

9611 Classrooms

9612 Schools

9613 School district

9620 Neighboring

9621 Classrooms

9622 Schools

9623 School districts

9630 Universities

9640 State and federal educational agencies

10000 Costs

10100 Development

10110 Time

10111 No. hours

10111.1 Instructional activities

10111.2 Related outside class
activities

10112 Foregone activities

Q9600 Were other institutions involved in this effect? How?

Q10000 What were the program costs?

Q10100 What were the costs of development (planning, research, curriculum development, etc.)?

Q10110 How much time was devoted to development by each group involved? How was this time spent? What activities were foregone? What was the dollar cost of this time?

10113 *Dollar cost of time devoted
(additional salaries required)*

10114 *Group*

10114.1 *Students*

10114.2 *Teachers/staff*

10114.3 *Administrators*

10114.4 *Volunteer personnel*

10114.5 *Outside specialists*

10120 *Equipment*

10121 *Purchase cost*

10122 *Depreciation*

10123 *Overhead*

10124 *Maintenance*

10130 *Supplies*

10131 *Dollar cost*

10200 *Implementation*

10210 *Time*

10211 *No. hours*

10211.1 *Instructional activities*

10211.2 *Related outside class
activities*

10212 *Foregone activities*

Q10120 What was the cost of equipment required for development?

Q10130 What supplies were required for development?

Q10200 What were the costs of implementation (new facilities, equipment purchases, staff training, etc.)?

Q10210 How much time was devoted to implementation by each group involved? How was this time spent? What activities were foregone? What was the dollar cost of this time?

10213 *Dollar cost of time devoted
(additional salaries required)*

10214 *Group*

- 10214.1 *Students*
- 10214.2 *Teachers/staff*
- 10214.3 *Administrators*
- 10214.4 *Volunteer personnel*
- 10214.5 *Specialists*

10220 *Space*

- 10221 *New facilities installed*
- 10222 *Initial cost*
- 10223 *Interest on debt*
- 10224 *Foregone interest on equity*
- 10225 *Depreciation*
- 10226 *Overhead*
- 10227 *Maintenance*

10230 *New equipment*

- 10231 *Initial cost*
- 10232 *Interest on debt*
- 10233 *Foregone interest on equity*
- 10234 *Depreciation*
- 10235 *Overhead*
- 10236 *Maintenance*

10300 *Operation*

Q10220 What was the cost of new facilities constructed especially for the program?

Q10230 What was the cost of new equipment purchased especially for the program?

Q10300 What was the normal operating cost of the program?

10310 Time

Q10310 How much time was required for operation by each group involved? How was this time spent? What activities were foregone? What were the dollar costs of this time?

10311 No. hours

10311.1 Instructional activities

10311.2 Related outside-class activities

10312 Foregone activities

10313 Salaries

10314 Fringe benefits

10315 Groups

10315.1 Students

10315.2 Teachers/staff

10315.3 Administrators

10315.4 Volunteer personnel

10315.5 Maintenance personnel

10320 Space

Q10320 What was the cost of space required for program operations?

10321 Space required

10321.1 Classrooms

10321.11 Types and size

10321.12 Number

10321.13 Time

10321.2 Additional facilities

10321.21 *Types and size*

10321.22 *Number*

10321.23 *Time*

10322 *Foregone uses of space*

10323 *Dollar cost of existing space*

10323.1 *Interest on debt*

10323.2 *Foregone interest on equity*

10323.3 *Depreciation*

10323.4 *Overhead*

10323.5 *Maintenance*

10330 *Equipment*

Q10330 What was the cost of equipment required for program operations?

10331 *Equipment required*

10332 *Foregone uses*

10333 *Dollar cost of existing equipment*

10333.1 *Depreciation*

10333.2 *Overhead*

10333.3 *Maintenance*

10340 *Supplies*

Q10340 What was the cost of supplies required for program operation?

10341 *Dollar cost per pupil*

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